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March 22, 2022

U.S. Department of Transportation, Docket Operations
West Building Ground Floor, Room W12-140
1200 New Jersey Avenue, SE
Washington, DC 20590

Re: Summary Grant Amendment to Exemption No. 19039, Petition for Exemption to Conduct Unmanned Aircraft Systems (UAS) Operations Allowed by Special authority for certain unmanned aircraft systems. Title 49 U.S.C. § 44807, and 14 C.F.R. Part 11 to Authorize Commercial Agricultural- Related Services with UAS Weighing 55 Pounds or More by adding the DJI Agras T-30

A. SUMMARY:

On behalf of our client, Bennett Ag Research Corp, an agricultural services company (hereafter known as Bennett Ag Research Corp), and pursuant to Title 49 U.S.C. § 44807, Special authority for certain unmanned aircraft systems and 14 C.F.R. Part 11, Bennett Ag Research Corp hereby respectfully requests to amend their Petition for Exemption to add the DJI AGRAS T-30 unmanned aircraft systems ("UAS") weighing over 55 pounds but no more than 142 lbs. maximum spray weight and 171.96 lbs. maximum spreading weight, for agricultural operations and vegetation control. The operations will be conducted within and under the conditions outlined herein, or as may be established by the FAA, as required by Title 49 U.S.C. § 44807.

Currently, Bennett Ag Research Corp already has an approved Exemption for the DJI Agras T-20, Exemption No. 19039. Bennett Ag Research Training Manual, Flight Operations Manual, and safety manuals have already been submitted with their original petition.

The proposed operation in this amended Petition for Exemption to add the T-30 is the same as their current approved Exemption, Exemption No. 19039.

In this particular amendment, the requested exemption would permit the operation of no more than one DJI AGRAS T-30 by petitioner, under controlled conditions in predetermined airspace that is, 1) Limited in scope 2) Controlled as to access by mission essential personnel only. Grant of the requested exemption is based upon the concise direction expressed within Title 49 U.S.C. § 44807; the added authority granted by the Act, as amended; an equivalent level of safety regarding flight operations as expressed herein, and significant cost savings achieved by transitioning from traditional manned aerial resources to UASs. The petitioner respectfully requests that the FAA grant the requested exemption without delay. Petitioner will operate the DJI AGRAS T-30 while keeping the documents required by the regulations at the ground control station and immediately accessible to the Pilot in Command (PIC) and by modification of the required markings (registration number) of the UAS to be displayed on the fuselage.

The name and address of the Petitioner is:

Bennett Ag Research Corp

The primary contact for this petition, with a copy to me at the address above is:

Alex Bennett
Bennett Ag Research Corp
1109 Ivy Ave.
Richland, IA 52585

In support of this Petition for Exemption, Bennett Ag Research Corp will submit the following associated UAS operating documents:

- DJI Agras T-30 Quick Start Guide
- DJI AGRAS T-30 Operating Manual
- DJI AGRAS T-30 Intelligent Battery Station Manual
- DJI Agras Additional Information

All of these documents will be submitted on a confidential basis under separate cover, pursuant to 14 C.F.R. § 11.35(b), as the documents contain confidential commercial and proprietary information that Bennett Ag Research Corp has not and will not share with others. The information contained in this material is not generally available to the public and is protected from release under the Freedom of Information Act, 5 U.S.C. § 552 *et seq.*

B. BACKGROUND OF PETITIONER AND MANUFACTURER

Bennett Ag Research Corp is a diversified provider of agricultural services for a wide variety of Government and commercial clients throughout the US. Bennett Ag Research Corp is utilizing their experience in agriculture to expand into missions well suited for over 55 lb. UAS/drones to reduce risk and improve efficiencies and value added. Bennett Ag Research Corp plans to provide a wide array of services in agricultural markets where UAS/drones fit the mission better and safer than manned aircraft. The major benefits to the general public are 1) reduction in injury to ground based applicators in challenging terrain, 2) reduced exposure to chemicals for applicators, 3) reduction in chemical drift compared to manned aircraft application, 4) reduced risk to flight crew compared to manned aircraft, 5) reduced exposure of surrounding beneficial vegetation, 6) more environmentally friendly application with reduced noise, 7) selective use of

chemicals for a safer more targeted application, and 8) better value for the customer.

The UAS for the purposes of this petition is the DJI AGRAS T-30.

DJI has an unparalleled presence in the UAS market with steadfast commitment to R&D, a culture of constant innovation and curiosity, and a focus on transforming complex technology into easy-to-use devices. Building on the ethos of “form follows function,” DJI products combine advanced technology with dynamic designs.

Established to produce DJI’s innovative products safely and responsibly, the wholly owned subsidiary Shenzhen Dajiang Baiwang Technology Co., Ltd. is a high-tech manufacturing facility specializing in unmanned aerial vehicles.

In 2016, Dajiang Baiwang passed the ISO 9001:2015 Quality Management System Certification and in 2017 passed the SGS ISO 14001:2015 Environmental Management System Certification.

DJI’s offices can now be found in the United States, Germany, the Netherlands, Japan, South Korea, Beijing, Shanghai, and Hong Kong. As a privately owned and operated company, DJI focuses on its vision, supporting creative, commercial, and nonprofit applications of their technology.

Today, DJI products are redefining industries. Professionals in filmmaking, agriculture, conservation, search and rescue, energy infrastructure, and more customers trust DJI to bring new perspectives to their work and help them accomplish feats safer, faster, and with greater efficiency than ever before.

Sales of the DJI Agras T-30 have occurred in China, Southeast Asia, and Korea for over six months with a combined total of 1,200,000 hours flown and 20,600.000 flights without any recorded incidents.

C. SYSTEM BENEFITS AND PUBLIC INTEREST

1. Bennett Ag Research Corp’s intent along with a complete range of agricultural vegetation and noxious weed control and management services, utilizing the DJI T-30 system optimized principally for spray applications.

Their processes protect crops from biological organisms, including weeds, pathogens, and arthropods, that interferes with the production of crops affecting quality and/or yield, which can impact consumers through higher crop prices. Spraying herbicides benefits agricultural ecology and increases the efficiency of harvesting operations. Further the selective use of chemicals for a safer more targeted application for utility weed control reduces the negative impact of excess pesticide application and residual chemicals being left in the soil or running off into streams or the water table.

2. Applications by manned helicopters for agriculture carries significant risks of fatality.¹

¹ See e.g., NTSB Special Investigative Report on the Safety of Agricultural Aircraft Operations, NTSB/SIR-14/01 (Adopted May 7, 2014):

“78 accidents [and 10 fatalities] occurred during calendar year 2013 and involved some aspect of agricultural (ag) operations, pilot training, or other crop protection activities. The report identifies the following recurring safety issues: lack of ag operations-specific fatigue management guidance, lack of ag operations-specific risk management guidance, inadequate aircraft maintenance, and lack of guidance for pilot knowledge and skills tests.”

This was such a concern that in 2014 the National Transportation and Safety Board commissioned a report to understand root causes. The enhanced safety achieved using an unmanned aircraft with the specifications described in this petition, as opposed to the much larger, manned aircraft carrying fuel and crew or passengers, is safer and exposes workers and other people on the ground to significantly less risk. Additionally, Bennett Ag Research Corp's UA use batteries which are not as flammable and explosive as 100LL or Jet A fuel. If there was an emergency where the UA crashed, there is a significantly lower chance of individuals being injured from an explosion or fire.

3. According to a USDA Economic Research Service Report, of the United States' 408 million acres of cropland, about 70% (286 million acres) is commercially treated with crop protection products. Out of that, the agricultural aviation industry treats 71 million acres of cropland aurally each year. By utilizing UAS, this vital portion of our nation's food supply can be treated in a more environmentally safe way, thus protecting our streams from excessive chemical run off, algae blooms, etc.
4. A large portion of the agricultural land is currently sprayed by crews on foot, carrying heavy loads on steep, dangerous terrain. Bennett Ag Research Corp will replace this method using its aircraft. It is in the interest of safety to reduce worker exposure to this difficult and dangerous environment.
5. Manned aircraft availability and scheduling are becoming increasingly difficult and costly for Bennett Ag Research Corp customers. On average, each manned aerial application business has 2.1 aircraft, ranging in price from \$100,000 to \$1,400,000 depending on hopper size, engine type and engine size. Pilot shortages, aircraft shortages, and driver shortages are increasing. Smaller owners and non-governmental organizations without several hundred thousand acres are finding it difficult to obtain economical services with these figures. Bennett Ag Research Corp can increase service providers at a lower cost and alleviate pilot and service shortages for small landowners.
6. Manned airplanes and helicopters produce significant noise pollution that disrupt the public's ability to enjoy both private and public property. UAS are much quieter and will not disrupt the public as much as manned aircraft; thus, the benefit will be recognized as a reduction in noise pollution.
7. Pesticides being sprayed from high elevations can be picked up by the wind and carried for miles. By flying at a lower altitude (6-12 m), and by never leaving the customer's site, there is a significantly reduced chance of pesticides ("driftable fines") being accidentally sprayed in the wrong area. With manned aircraft and helicopters, this can happen in a number of ways: Pilot error or map misinterpretation en route to the site, pesticides being picked up by the wind and blown onto neighboring property affecting commercial cropland and residential areas, and equipment malfunction.

D DJI AGRAS T-30 SAFETY FEATURES AND SPECIFICATION.


Enhanced safety features, inspections, testing data and specifications of the T-30 are included in the attached proprietary documents. Bennett Ag Research Corp requests an exemption for the purpose of operating Unmanned Aircraft Systems (UAS) weighing 55 pounds or more, but no more than 142 lbs. maximum spray weight and 171.96 lbs. maximum

spreading weight, to provide commercial agricultural-related services in the United States.

E. CONCLUSION

For the foregoing reasons, Bennett Ag Research Corp respectfully requests that the FAA grant this amendment to add the DJI Agras T-30. Should you have any questions, or if you need additional information to support Bennett Ag Research Corp Petition, please do not hesitate to contact the undersigned.

Respectfully Submitted,



Kelly J. Neubecker

Cc. Alex Bennett